

Mesoscale Science Workshop

Breakout Panel 2: Defect Interactions from Dislocation to Grains and Mesostructure Evolution **B170 R1091**

August 13th, 2013

- 2:30 p.m. Advanced Batteries, **B. Kozinsky** (Bosch)
- 2:50 p.m. Challenges and Opportunities for Mesoscale Modeling of
Electrochemical Systems, **B. Wood** (LLNL)
- 3:05 p.m. Characterization of Mesoscale Materials for Energy Storage Using
Synchrotron Light Sources, **J. Lee** (LLNL)
- 3:20 p.m. Panel Discussion: Energy Storage with Mesoscale Architecture
E. Duoss, T.W. Heo, B. Kozinsky, J. Lee, T. Haximali and B. Wood
- 3:45 p.m. **Break**
- 4:00 p.m. Challenges of Dislocation Dynamics in Pure Metals Alloys,
W. Cai (Stanford)
- 4:20 p.m. Dislocation Dynamics Interacting with Grain Boundaries and Other
Non-Dislocation Microstructure, **T. Arsenlis** (LLNL)
- 4:35 p.m. Panel Discussion: Mesoscale Plasticity
**T. Arsenlis, V. Bulatov, W. Cai, G. Campbell, J. Marian,
R. Rudd, and D. Srolovitz**
- 5:00 p.m. *Adjourn*

August 14th, 2013

- 9:00 a.m. Dynamic Transmission Electron Microscopy for
Mesoscale Characterization, **G. Campbell** (LLNL)
- 9:15 a.m. Radiation Damage and Phase Change at the Mesoscale,
J. Marian (LLNL)
- 9:30 a.m. Co-Evolution of Dislocation and GB Microstructures
at the Mesoscale, **V. Bulatov** (LLNL)

Chairs: Robert Rudd (LLNL) and Christian Mailhot (WSU)
Admin POC: Kim Elmore

- 9:45 a.m. Panel Discussion: Mesoscale Microstructural Evolution
V. Bulatov, W. Cai, G. Campbell, J. Marian and D. Srolovitz
- 10:10 a.m. **Break**
- 10:20 a.m. Mesoscale Science with Large-Scale Computing, **D. Richards** (LLNL)
- 10:35 a.m. Surface Growth with Mesoscale Features, **L. Zepeda** (LLNL)
- 10:50 a.m. Panel Discussion: Large-Scale Computer for Mesoscale Science,
T. Arsenlis, T. Oppelstrup, D. Richards, E. Schwegler
and L. Zepeda
- 11:15 a.m. Joint Session with Breakout 1: In Situ Characterization of Mesoscopic
Structure in Materials
- 12:30 p.m. **Lunch**
- 2:00 p.m. Produce Viewgraphs on Priority Research Directions
- 5:00 p.m. *Adjourn*

August 15th, 2013
B170 R1091/1092

- 9:00 a.m. Write Report (Co-chairs and Panelists)
- 12:00 p.m. *Adjourn*